How to choose a Wi-Fi router in 2020?

What should I do if you start noticing frequent disconnections when connecting via Wi-Fi, and buffering and image artifacts when viewing streaming content? Your gadgets may not be able to work at full capacity due to an outdated router. Tp link distributor

If you use a model that is more than 5 years old, then the speed of your tariff will not be so important, because the quality of modern online entertainment depends not only on the maximum cable speed, but also on the performance of the "box" in the corridor that transmits the Internet to all devices.

Choosing and configuring a router correctly will eliminate annoying problems and increase efficiency — which is especially important when many of us are forced to study and work from home, and just spend much more time there than before.

How do I choose a suitable router? We have prepared the best tips for you!

Wi-Fi Standard

The first thing you should pay attention to when choosing a router is the Wi – Fi standard. The main standards today are 802.11 n (Wi-Fi 4), 802.11 ac (Wi-Fi 5) and 802.11 ax (Wi-Fi 6).

The speed of Wi-Fi depends on the distance to the device, obstacles (walls and ceilings), electromagnetic interference, and the number of gadgets connected to the network. General recommendations are given below, depending on the usage scenario.

Wi-Fi Range

Wi-Fi routers operate in two main radio bands-2.4 GHz and 5 GHz. Simple tasks, such as email and web browsing, can be performed on 2.4 GHz, while" heavy " tasks, such as online games or HD streams, are better performed on the 5 GHz

band. Make sure that your router has at least two ranges that will allow for maximum performance.

Read more about the 2.4 GHz and 5GHz bands here.

Modulation (QAM)

Thanks to QAM modulation, the router transmits more data per unit of time. For example, at 1024-QAM, each character contains 10 bits instead of 8 bits, which increases the speed by 25% compared to the 802.11 ac 256-QAM standard. If you need fast Wi-Fi, don't forget about this option.

Functions that affect coverage

The environment can greatly affect the coverage and performance of Wi-Fi devices. The same router will work differently on different sites. In general, the connection will be good if you use the 2.4 GHz band within 20 meters, and 5 GHz-within 15 meters. High-gain antennas, as well as technologies such as Beamforming and RangeBoost will help increase coverage.

Features that affect throughput

Another factor that affects the speed of Wi-Fi is the number of devices connected to the network. If there are a lot of gadgets in the house – we recommend that you pay more attention to the presence of the following features in the router::

MU-MIMO

Thanks to MU-MIMO (Multiple-User, Multiple-Input and Multiple-output), routers can interact with multiple devices at once without delays. This increases the efficiency of information transmission on the network, especially in high-density environments – because each client has more chances to establish a connection with the router without wasting time waiting.

Read more about MU-MIMO here.

OFDMA/OFDM

OFDMA or OFDM technology improves network efficiency and allows you to simultaneously meet a wide variety of network requests — from the most insignificant to the most resource-intensive. OFDMA is a key feature of Wi-Fi 6 that significantly increases network bandwidth.

Ethernet Ports

The abbreviation LAN stands for “local area network”. It consists of two or more devices connected via a physical cable or wireless connection in a specific location, while a WAN, or “wide area network”, covers several geographical locations. The most famous example of a WAN is probably the Internet.

On Wi-Fi routers, the LAN ports are used for local connection via cable, and the WAN port is used for Internet access. Thus, having a high-speed port is extremely important for connection speed. Ethernet ports can be multi-Gigabit, Gigabit, and 100 Mbps (Fast Ethernet).

A gigabit WAN port will be more than enough to take full advantage of tariffs at speeds from 100 Mbps to 1 Gbps. When choosing a router, check the speed of the tariff from your Internet service provider and select the model with the appropriate ports. If a wired connection is particularly important to you, pay attention to the number of LAN ports for connecting home devices.